Statement

Of

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"The State of Interoperability:
Perspectives on Federal Coordination of Grants, Standards, and Technology"

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Mr. Chairman, and distinguished members of the committee, my name is Jim Gass and I thank you for this opportunity to appear before you. I am the Deputy Director of the National Memorial Institute for the Prevention of Terrorism (MIPT) in Oklahoma City and have been with MIPT for more than five years. Prior to joining MIPT, I served 30 years in the United States Army.

MIPT is the third component of the Memorial of the bombing of the Alfred P. Murrah Federal Building, April19, 1995. It was created in response to the victims', family members', responders' and citizens' desires to have an Institute dedicated to proactive efforts to prevent terrorism or better mitigate its effects.

Since our inception, our primary focus has been on projects to improve the preparedness of emergency responders. We are grateful to Congress for originally supporting us with appropriations in our early years. Initially, our awards were made through the National Institute of Justice, Department of Justice, but with the formation of the Department of Homeland Security, we have received additional discretionary awards to continue our programs.

Language in some of our earlier Congressional Appropriations Bills charged us with doing a number of things. I would like to restate a few of those because they provide some underpinning to my remarks about the critically important subject this committee is hearing today. These bills instructed us to conduct counterterrorism research and development; create an Internet repository where emergency responders can share best practices, observations, and lessons learned; and to institute a pilot project to develop an RDT&E system similar to the Department of Defense System.

This guidance and our desire to focus our own research agenda on emergency responders, led us to conduct an effort we called Project Responder which produced a report titled "National Technology Plan for Emergency Response to Catastrophic Terrorism. Project Responder evaluated needed capabilities as stated by the responders themselves, studied the state of current technology and provided information that could help inform federal and private sector research and development agendas. Unified Incident Command Decision Support and Interoperable Communications was a significant part of the capabilities needed by responders. In addition to the clear increases in capability that interoperable communications would provide, many other highly desired and needed functional capabilities could be enabled by interoperable communications. These functional capabilities are currently not available, but could be achievable at low technological risk. These include 1) point location and identification to help incident commanders know where their personnel and equipment are at any given time, 2) seamless connectivity to aid when multiple agencies and jurisdictions work together at a site, and 3) information assurance to ensure the availability of information, as well as what is communicated, not be compromised by adversaries during a crisis. Providing command information and dissemination tools and multimedia functional capabilities were also identified by Project Responder, but were not as highly prioritized as the previous three. One of our key findings was that technology already exists to achieve interoperable communications. New research and development into communications technologies is not needed to solve interoperability. Instead Project Responder concluded that "organizational changes,

equipment/interface standards, and practice/training may be more relevant than technology in solving some of the problems." I will return to these points later in my testimony.

I welcome the opportunity to talk to you today about the issue of communications interoperability and its importance to the response community. The ability to communicate is essential for local emergency responders and the State and Federal officials who assist them. But too often in major disasters our ability to communicate with one another has been impaired. At Oklahoma City in 1995, at the World Trade Center and the Pentagon on September 11, 2001, and in the countless other emergencies that our emergency responders face everyday, communications interoperability problems not only make their jobs more difficult, but risk the lives of the both victims and responders.

Unfortunately, these are not new problems. One of MIPT's most important goals is to promote the sharing of lessons learned and best practices within the emergency response community. Two years ago MIPT launched the *Lessons Learned Information Sharing* (*LLIS.gov*) system, the national network for lessons learned and best practices. A quick glance on *LLIS.gov* shows several lessons learned related to communications interoperability. For example, during the response to the attack on the Pentagon in 2001, mutual aid personnel arrived at the scene with radios that could not communicate – or easily be reprogrammed - with either the Arlington County Fire or Police Departments. And the DC Metro area was probably years ahead of most jurisdictions in moving toward interoperability. With the communications system, technical personnel, and cellular phone networks quickly overloaded during the initial response to the World Trade Center attacks, emergency responders were forced to rely on foot messengers to communicate during the first few hours of operations.

The response to Hurricane Katrina further highlighted communications interoperability as a significant problem in the response – at the Federal, State, and local level. The after-action report *The Federal Response to Hurricane Katrina – Lessons Learned* concludes that communication plans and assets were neither sufficient nor adequately integrated to respond effectively to the disaster. Many available communications assets were not utilized fully because there was no National, State-wide, or regional communications plan to incorporate them. Officials from national leaders to emergency responders on the ground lacked a common interoperable communications infrastructure to provide the necessary situational awareness so critical to a prompt and effective response. The Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina found that "issues with interoperability among Federal, state, and local communications systems complicated the efforts of first responders and government officials to work together in managing the response to Katrina."

Because communications problems have appeared as a "lessons learned" in almost every major terrorism event or major natural disaster, why haven't we fixed it? It's because some of the components of fixing it are incredibly complex and incredibly expensive. I believe the components of the fix falls into five categories: (1) National Policies and Strategies; (2) National Standards; (3) Frequency spectrum; (4) Resources for replacing legacy systems; and (5) a common operating picture.

Let me give a brief discussion of each:

First, I believe that we must, as a nation, develop a set of comprehensive policies or strategies that lay out a national interoperable communications vision. Jurisdictions across the country follow their own guidelines regarding communications systems and equipment based upon their own resources and needs. Some areas of the country have established regional or state communications systems that link State and local agencies. But Federal policies and strategies are needed to guide decision makers at all levels of to strive for a national solution to the interoperability problem.

Second, there is also a lack of national standards for interoperable communications. A recent report released by Inspector General of the Department of Homeland Security found that no new standards have been issued since February 2004. National interoperable communications standards must be developed in order to provide guidance to state and local jurisdictions on acceptable and required equipment and systems. The Responder Knowledge Base, another key MIPT program, provides information on adopted equipment standards and certifications to the emergency response community and will quickly disseminate information on new interoperable communications standards as it becomes available. There is work underway to develop these standards called P25, but there are complex issues associated with that effort. The constant advances in technology make this a moving target. Just imagine that if ten years ago, we had decided to assign national standard to computers. We might well have been stuck in the 286 mode instead of Pentium 2 or 3. Having said that, it still is not an excuse for not setting a minimum standard to meet emergency response interoperability needs based on currently available technology knowing that in a few years (or months) you may have adjust them based on the advances. And, I believe that we must insist on independent third party testing to assure compliance with the standards.

Third, we must, as a nation, decide how much and in which frequency spectrums we need to give exclusive domain to the emergency response community. It is my understanding that we have a good idea about that, but those spectrums are currently occupied and buying out the spectrum to dedicate to emergency response is both a legal and expensive problem. I'm not an expert on that but I have read that the figure to buy out spectrum short of current agreements is in the billions.

Forth, and only after we have national standards, we must consider the amount of resources that would be required to replace all of the non-compliant communications in the nation and who should pay. Most communications capability resident in the local jurisdictions have been purchased with local dollars and designed to meet local needs as best envisioned by local leaders. Once we have national standards, how do we phase out the old and phase in the new. I don't know the exact number of communications devices there are in the nation, but if we have upwards of 8,000,000 responders and even half of them are equipped with communication equipment, replacing them all would be a staggering amount and doesn't answer the question about who would have the primary responsibility for the cost burden—Federal, state or local? Jurisdictions across the country do not have the resources available to do an immediate upgrade to existing systems and equipment. Project Responder found that "jurisdictions have existing radios and support tower infrastructure and do not have the money to upgrade them". Once we have national standards and certification testing, I have to believe that when new equipment is

purchased, even with local money, jurisdictions would go in the direction of standards compliant equipment.

Fifth, I believe we must procedurally standardize how and with whom we must communicate. This is definitely not a technology issue—it is a procedures issue. Even if we had perfect ability for everybody to communicate with everybody else, it doesn't mean that is how we would want to operate. We must determine in advance who needs to talk to whom and provide them with the information about how to link their communications based on the function(s) being performed. I mentioned that I came from an Army background. We used to have Signal Operating Instructions (SOIs) which provided all the players in the area of operations predetermined information about how to contact other people based on the levels of command and functions being performed. These SOIs contained the frequencies and call signs of all of the participants who might enter the area of operations. No one had to search for information about how to contact the appropriate people to engage their capabilities. As the National Response Plan, the National Incident Management System and mutual aid agreements mature and are practiced, this process will become clearer. But it is one of the reasons Project Responder suggested that "organizational changes, equipment/interface standard and practice/training may be more relevant than technology in solving some of the problems."

Mr. Chairman, this concludes my written statement. I am happy to answer any questions that you or the members of the subcommittee may have.